

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

SZ DJI TECHNOLOGY CO., LTD. and  
DJI EUROPE B.V.,

Plaintiffs,

V.

AUTEL ROBOTICS USA LLC and AUTEL  
AERIAL TECHNOLOGY CO., LTD.,

Defendants.

C.A. No. 16-706-LPS  
(Consolidated)

## JURY TRIAL DEMANDED

**REDACTED - PUBLIC VERSION**

**AUTEL'S SECOND AMENDED ANSWER, AFFIRMATIVE DEFENSES, AND  
COUNTERCLAIMS TO PLAINTIFFS' COMPLAINT FOR PATENT INFRINGEMENT**

Defendants Autel Robotics USA LLC (“Robotics USA”) and Autel Robotics Co., Ltd. (f/k/a Autel Aerial Technology Co., Ltd.) (“Autel ATC”) (collectively, “Autel”) hereby set forth their Second Amended Answer, Affirmative Defenses, and Counterclaims in response to Plaintiffs SZ DJI Technology Co., Ltd. (“DJI SZ”) and DJI Europe B.V.’s (“DJI BV”) (for purposes of this Answer, DJI SZ and DJI BV are collectively referred to as “DJI”) Complaint for Patent Infringement (“Complaint”) originally filed in the Western District of Washington as Case No. 2:17-cv-00776-RAJ, then transferred to Delaware as Civil Action No. 18-378-LPS, and finally consolidated with Civil Action No. 16-706-LPS. (Unless expressly stated otherwise, all references to the Complaint herein refer to D.I. 1 in Civil Action No. 18-378-LPS.)

Autel denies each and every allegation contained in the Complaint that is not expressly admitted below. Any factual allegation admitted below is admitted only as to the specific admitted facts, and not as to any purported conclusions, characterizations, implications, or

speculations that arguably follow from the admitted facts. Autel denies that DJI is entitled to the relief requested or any other relief.

### **PARTIES**

1. Admitted.

2. Admitted.

3. Admitted.

4. Autel lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations in Paragraph 4, and therefore denies them. In addition, the Complaint against Autel (USA), Inc. has been dismissed, and therefore no further response is necessary.

5. Autel admits that Autel ATC is a Chinese corporation with a principal place of business at 9th Floor, Building B1, Zhiyuan, Xueyuan Road, Xili, Nanshan, Shenzhen 518055, China. Autel lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations in Paragraph 5, and therefore denies them.

6. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 6, and therefore denies them. In addition, the Complaint against Autel Intelligent Technology Co., Ltd. (“Autel ITC”) has been dismissed, and therefore no further response is necessary. *See* D.I. 240 in C.A. No. 16-706-LPS (Cons.).

### **JURISDICTION AND VENUE**

7. Autel admits that the Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338, and this is a civil action for patent infringement arising under the patent laws of the United States. Autel denies all of the remaining allegations in Paragraph 7.

8. Autel admits that Robotics USA is an indirect subsidiary of Autel ATC. Autel denies all of the remaining allegations in Paragraph 8.

9. Autel admits that Robotics USA has sold UAV products in the United States, operates [www.autelrobotics.com](http://www.autelrobotics.com), and sells and distributes its products via [Amazon.com](http://Amazon.com). Autel denies all of the remaining allegations in Paragraph 9.

10. Autel admits that Robotics USA has sold products to U.S. electronics retailer Best Buy. Autel denies all of the remaining allegations in Paragraph 10.

11. Autel admits that this Court has personal jurisdiction over Robotics USA, and that venue in this jurisdiction is appropriate as to the claims against Robotics USA. Autel denies all of the remaining allegations in Paragraph 11.

### **FACTUAL BACKGROUND**

12. Autel admits that the Complaint purports to seek injunctive relief and damages for the alleged infringement of U.S. Patent Nos. 9,284,040 and 9,592,744 (the “Patents-in-Suit”). Autel denies the remaining allegations of Paragraph 12.

### **DJI**

13. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 13, and therefore denies them.

14. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 14, and therefore denies them.

15. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 15, and therefore denies them.

16. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 16, and therefore denies them.

17. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 17, and therefore denies them.

**DJI'S PATENTS-IN-SUIT**

18. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 18, and therefore denies them.

19. Autel admits that U.S. Patent No. 9,284,040 (the "'040 patent") states on its face that the United States Patent and Trademark office ("USPTO") issued the '040 patent on March 15, 2016; that it is entitled "Self-tightening rotor;" and that Exhibit 1 of the Complaint appears to be an accurate copy of the '040 patent. Autel lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations in Paragraph 19, and therefore denies them.

20. Autel admits that U.S. Patent No. 9,592,744 (the "'744 patent") states on its face that the USPTO issued the '744 patent on March 14, 2017; that it is entitled "Battery and unmanned aerial vehicle with the battery;" and that Exhibit 2 of the Complaint appears to be an accurate copy of the '744 patent. Autel lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations in Paragraph 20, and therefore denies them.

**AUTEL**

21. Admitted.

22. Autel admits that Robotics USA is an indirect subsidiary of Autel ATC. Autel also admits that Robotics USA was incorporated in Delaware in November 2015, has a principal place of business at 22522 29th Drive SE I101, Bothell, WA 98021, and marketed and sold the X-Star and X-Star Premium in the United States. Autel denies the remaining allegations of Paragraph 22.

23. Autel admits that Robotics USA first imported UAVs into the United States in or around January 2016. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations of this paragraph, and therefore denies them.

24. Admitted.

25. The allegations in Paragraph 25 are legal conclusions to which no response is required. To the extent that one is required, Autel denies these allegations.

26. The allegations in Paragraph 26 are legal conclusions to which no response is required. To the extent that one is required, Autel denies these allegations.

27. The allegations in Paragraph 27 are legal conclusions to which no response is required. To the extent that one is required, Autel denies these allegations.

### **THE COMMERCIAL UAV MARKET**

28. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 28 given that Plaintiffs have not provided the citation to the market report that it purportedly quotes, and therefore denies them.

29. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 29, and therefore denies them.

30. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 30 given that Plaintiffs have not provided citations to the articles that it purportedly quotes, and therefore denies them.

### **COMPETITION BETWEEN DJI AND AUTEL**

31. Admitted.

32. Autel admits that it competes in the UAV market, but denies the remaining allegations of Paragraph 32.

33. Autel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 33, and therefore denies them.

34. Autel admits that the X-Star UAV products were introduced at CES 2016, and that there was an initial price of \$799 for the X-Star and \$999 for the X-Star Premium. Robotics USA further admits that, as of the date of the Complaint, the price of the X-Star was \$699 and the price of the X-Star Premium was \$899. Autel denies all remaining allegations of Paragraph 34.

35. Denied.

36. Denied.

37. Denied.

38. Denied.

39. Denied.

**COUNT I**  
**(Infringement of U.S. Patent No. 9,284,040)**

40. Autel repeats and incorporates by reference each of its responses to the preceding Paragraphs 1–39 as if fully set forth herein.

41. Denied.

42. Denied.

43. Denied.

44. Denied.

45. Denied.

**COUNT II**  
**(Infringement of U.S. Patent No. 9,592,744)**

46. Autel repeats and incorporates by reference each of its responses to the preceding Paragraphs 1–45 as if fully set forth herein.

47. Denied.

48. Denied.

49. Denied.

50. Denied.

51. Denied.

**REPLY TO PLAINTIFFS' PRAYER FOR RELIEF**

WHEREFORE, Autel denies that Plaintiffs are entitled to any relief whatsoever, including the relief requested in Plaintiffs' Complaint, and incorporates by reference Autel's Request for Relief set forth below.

**AFFIRMATIVE AND OTHER DEFENSES**

Autel alleges and asserts the following defenses in response to the allegations in the Complaint, undertaking the burden of proof only as to those defenses deemed affirmative defenses by law, regardless of how such defenses are presented herein.

**FIRST AFFIRMATIVE DEFENSE**  
**(Noninfringement)**

Autel does not infringe and has not infringed under any theory, including directly, jointly, contributorily, or by inducement, any valid and enforceable claim of the '040 or '744 patent, either literally or under the doctrine of equivalents.

**SECOND AFFIRMATIVE DEFENSE**  
**(Invalidity)**

Each asserted claim of the '040 and '744 patent is invalid for failing to comply with one or more requirements of Title 35 of the United States Code, including, but not limited to, 35 U.S.C. §§ 101, 102, 103, 112, and/or 120, and the rules, regulations, and laws pertaining thereto.

**THIRD AFFIRMATIVE DEFENSE**  
**(Equitable Doctrines)**

DJI's claims for relief are barred or limited in whole or in part by principles of equity, including, without limitation, by the doctrines of unclean hands, waiver, acquiescence, and/or estoppel.

**FOURTH AFFIRMATIVE DEFENSE**  
**(Failure to State a Claim)**

DJI has failed to state a claim against Autel upon which relief may be granted with regard to each and every claim for relief alleged in the Complaint.

**FIFTH AFFIRMATIVE DEFENSE**  
**(Limitation on Damages)**

DJI's recovery for the alleged infringement of the '040 and/or '744 patents, if any, is limited or barred by the provisions of Title 35 of the United States Code, including, but not limited to, 35 U.S.C. §§ 284, 286, and/or 287.

**SIXTH AFFIRMATIVE DEFENSE**  
**(Prosecution History Estoppel)**

DJI is estopped from asserting infringement of the claims of the '040 and/or '744 patents under the doctrine of equivalents via the doctrine of prosecution history estoppel because of amendments, admissions, and/or statements made during the prosecution of the applications leading to the '040 and '744 patents.

**RESERVATION OF RIGHTS**

To the extent not already pled, Autel reserves the right to add any additional affirmative defenses pending further investigation and discovery in this case.



### **COUNTERCLAIMS**

52. Pursuant to Rules 13 and 20 of the Federal Rules of Civil Procedure, Counterclaim Plaintiffs Autel Robotics USA LLC and Autel Robotics Co., Ltd. (collectively, “Autel”) assert the following Counterclaims against Counterclaim Defendants SZ DJI Technology Co., Ltd., DJI Europe B.V., and DJI Technology Inc. (for purposes of these Counterclaims, Counterclaim Defendants are collectively referred to hereafter as “DJI”). Autel reserves the right to assert additional counterclaims which may be revealed during investigation and discovery in this case.

### **PARTIES**

53. Counterclaim Plaintiff Autel Robotics USA LLC (“Robotics USA”) is a Delaware limited liability company with a principal place of business at 22522 29th Dr. SE I101, Bothell, Washington.

54. Counterclaim Plaintiff Autel Robotics Co., Ltd. (f/k/a Autel Aerial Technology Co., Ltd.) (“Autel ATC”) is a Chinese corporation with a principal place of business at 9th Floor, Building B1, Zhiyuan, Xueyuan Road, Xili, Nanshan, Shenzhen 518055, China.

55. Counterclaim Defendant SZ DJI Technology Co., Ltd. (“DJI SZ”) is a Chinese corporation with its principal place of business at 14th Floor, West Wing, Skyworth Semiconductor Design Building, No. 18 Gaoxin South 4th Ave, Nanshan District, Shenzhen, China. DJI SZ is responsible for the research, development, and manufacture of DJI-branded products sold in the United States.

56. Counterclaim Defendant DJI Europe B.V. (“DJI BV”) is a European corporation with its principal place of business as Bijdorp-Oost 6, 2992 LA Barendrecht, Netherlands. DJI BV is responsible for the import and sale of DJI-branded products in the United States.

57. Counterclaim Defendant DJI Technology Inc. (“DJI US”) is a California corporation with its principal place of business at 201 S. Victory Blvd, Burbank, California 91503. DJI US is registered with the New York Department of State (DOS ID# 512262) and has a regular and established place of business at 632 Broadway, New York, New York 10012. DJI US is responsible for marketing and customer service and support for DJI-branded products in the United States.

### **NATURE OF THE COUNTERCLAIMS**

58. In these Counterclaims, Autel seeks a declaration that it does not infringe any claim of the ’040 patent or the ’744 patent or, alternatively, that those patents are invalid and/or unenforceable. According to the Complaint in this action, DJI SZ is the owner of the ’040 and ’744 patents and DJI BV is the exclusive licensee of those patents. (D.I. 1 at ¶¶ 19-20). Copies of those patents are attached to the Complaint as Exhibits 1 and 2. (D.I. 1, Exs. 1-2.)

59. In these Counterclaims, Robotics USA also seeks to end DJI SZ, DJI BV, and DJI US’s (collectively hereinafter, “DJI”) unauthorized and infringing manufacture, use, sale, offering for sale, and/or importation of methods and products incorporating Autel’s intellectual property, including U.S. Patent Nos. 7,979,174 (“the ’174 patent”); 9,260,184 (“the ’184 patent”); and 9,979,000 (“the ’000 patent”) (collectively, “the Asserted Patents”). Robotics USA is the owner of all rights, title, and interest in the Asserted Patents.

60. In these Counterclaims, Autel also seeks to end DJI’s monopolistic and anti-competitive behavior in the United States. Specifically, Autel brings these claims against DJI for violations of the Sherman Act’s prohibition on monopolization and attempted monopolization, as well as the California and Hawaii state law prohibitions on unfair practices, including below-cost pricing.

61. DJI and Autel compete in the U.S. market for “prosumer” drones. “Prosumer” drones, known more formally as unmanned aerial vehicles (or “UAVs”), are medium-priced drones that have become increasingly popular in the United States over the past five years. More than toys and less than fully-configured professional units, these prosumer drones are both easy to use, which makes them suitable for consumers, and contain “pro” features, like improved cameras, navigation software and growing intelligence. DJI has a dominant share of the “prosumer” market, roughly 70% as described by the U.S. Government.

62. Nearly a dozen companies have attempted to bring new and better “prosumer” drones to American consumers over the last few years. That could have resulted in competition at its best: innovative, entrepreneurial, focused on bringing better products to consumers, featuring new start-ups that turn an idea into a business. DJI uses its dominant market share to maintain and extend its monopoly.

63. DJI uses predatory pricing to drive away competitors. Indeed, in 2015, DJI’s founder, Frank Wang, looked down the road to 2018 and boasted of DJI’s control of the drone industry, explaining that “If DJI wants the industry to be low-margin, it will be low-margin”; a statement that clearly indicated control of the industry. Not surprisingly, it was in that year, 2015, that DJI “aggressively dropped its prices by as much as 70%,” according to the U.S. Department of Homeland Security (“DHS”), a reduction that DJI’s competitors were unable to meet. Then in 2016 and 2017, DJI took direct aim at new competitors, including Autel, charging predatory prices (*i.e.*, prices below average variable cost) for its most popular and top-of-the-line models in early 2016; continuing predatory pricing in 2016, and expanding its predatory pricing in 2017 to include six models, including its most popular one. In 2016 and 2017, four competitors exited the business entirely and another was forced to reduce its workforce.

64. [REDACTED]

[REDACTED]

65. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

66. [REDACTED]

[REDACTED]

67. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

68. [REDACTED]

[REDACTED]

[REDACTED]

69. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A series of horizontal black bars of varying lengths, representing redacted text. The bars are arranged in a list-like fashion, with some bars being longer than others, suggesting different amounts of text were redacted in each instance.

70. Autel has been harmed by DJI’s predatory pricing scheme. Autel introduced its X-Star product in January 2016, a competitor to the same DJI models that were being sold below cost. The X-Star was lauded as the “DJI Phantom 3 Killer” because of its better performance and price. In March 2016, after Autel’s introduction of the then-better priced X-Star, DJI set predatory prices for the Phantom 3, reducing the price for that model to attack the X-Star’s price, introduced its Phantom 4 model, and promptly charged predatory prices for that new model as well. The harm to Autel was direct: first a workforce reduction in February 2017 and then cessation of imports of the X-Star to the U.S. market in late 2017. Autel suffered lost revenue,

lost sales, lost profits, and lost competitive opportunities to establish itself as a significant competitor to DJI.

71. American consumers were—and will continue to be—harmed as a result of DJI’s behavior. As a result of competitors being forced out of the market by DJI’s predatory pricing scheme, consumers have fewer choices. Free from the constraints of competition, DJI will be able to raise prices of prosumer drones to supra-competitive levels, more than recouping the losses it incurred through its predatory pricing. Consumers will continue to face higher prices and fewer choices. This harm will continue unless and until DJI’s unfair acts are stopped. And with a stranglehold on the market, DJI’s monopoly will be protected by high barriers to entry, the inability of damaged competitors to increase their output in any manner sufficient to challenge DJI’s hold on the market, and the knowledge in the industry that DJI can price below cost whenever it wishes to block the emergence of any significant challenger to its dominant market position. The result: American consumers can expect to pay more and get less.

#### **JURISDICTION AND VENUE**

72. This Court has subject matter jurisdiction over these counterclaims under 28 U.S.C. § 1331 (federal question), 28 U.S.C. § 1332 (diversity), 28 U.S.C. § 1338 (patents), 28 U.S.C. § 1367 (supplemental jurisdiction), and 28 U.S.C. § 2201 (declaratory relief).

73. This Court has subject matter jurisdiction over the counterclaims seeking a declaration of non-infringement or invalidity because they seek declaratory relief under 28 U.S.C. § 2201 for a controversy under the patent laws of the United States, 35 U.S.C. § 1, *et seq.* Thus, this Court has jurisdiction over these counterclaims under 28 U.S.C. §§ 1331 and 1338(a).

74. This Court has subject matter jurisdiction over the counterclaims seeking damages and injunctive relief for patent infringement under 28 U.S.C. §§ 1331 and 1338(a) because they arise under the patent laws of the United States, 35 U.S.C. § 1, *et seq.*

75. This Court has subject matter jurisdiction over the antitrust counterclaims under the Clayton Act 15 U.S.C. §§ 12-27, 29 U.S.C. §§ 52-53, because they arise under federal law, 28 U.S.C. § 1331, and as a civil action relating to commerce and antitrust regulation.

76. This Court has supplemental jurisdiction over the state law counterclaims under 28 U.S.C. § 1367, as they are so related to the federal claims that they form part of the same case or controversy. This Court also has subject matter jurisdiction over the state law counterclaims, as well as the other counterclaims described herein, pursuant to 28 U.S.C. § 1332 because the amount in controversy exceeds \$75,000 and there is diversity of citizenship among the parties.

77. This Court has personal jurisdiction over DJI SZ and DJI BV based on, *inter alia*, the filing of the related lawsuit by DJI SZ and DJI BV, *SZ DJI Technology Co, Ltd., et al. v. Autel Robotics USA LLC, et al.*, C.A. No. 16-706-LPS, in this jurisdiction.

78. This Court has personal jurisdiction over DJI SZ, DJI BV, and DJI US based on, *inter alia*, 15 U.S.C. §§ 15, 22 and 28 U.S.C. § 1391(b), (c), and (d) because they reside or transact business in this District, and because a substantial portion of the affected interstate commerce described herein was carried out in this District.

79. Indeed, directly or through an intermediary or agent, DJI SZ, DJI BV, and DJI US have committed acts within Delaware giving rise to these counterclaims and have established minimum contacts with Delaware such that the exercise of personal jurisdiction over DJI SZ, DJI BV, and DJI US would not offend traditional notions of fair play and substantial justice.

80. For example, on information and belief, DJI placed products into the stream of commerce via an established distribution channel(s) with the knowledge and expectation that such products would be sold in the State of Delaware. Those products pertain to (and allegedly practice) the '040 and '744 patents, and infringe the '174,'184, and '000 patents (the "Asserted Patents").

81. In addition, on information and belief, DJI has also knowingly induced infringement by others within the United States and this District by advertising, marketing, offering for sale, and selling devices containing infringing functionality to consumers, customers, distributors, resellers, partners, and end users in the United States, and by providing instructions, user manuals, advertising, and marketing materials that facilitate, direct, or encourage the use of infringing functionality with knowledge thereof.

82. DJI's conduct substantially affected interstate commerce among the States and in the relevant market, and it did and will continue to have a substantial effect on interstate commerce. DJI imports drones into the U.S. and distributes them across the states. Further, Autel is engaged in interstate commerce, distributing its goods through various states, and DJI's conduct has impacted Autel's sales.

83. DJI's conduct substantially affected commerce in California. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Accordingly,

DJI has purposefully availed itself of California's laws.



84. DJI's conduct substantially affected commerce in Hawaii. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Accordingly, DJI has purposefully availed itself of Hawaii's laws.

85. Finally, DJI has derived substantial revenues from its infringing acts in this District. [REDACTED]

[REDACTED]

86. Venue is proper in this District under 28 U.S.C. § 1391 and 28 U.S.C. § 1400(b). In addition, DJI SZ and DJI BV have consented to venue in this Court by filing a suit for patent infringement against Autel in this District, as set forth in their Complaint. Moreover, venue for these counterclaims is proper in this Court as it is the tribunal for the present action.

### **ALLEGATIONS ON THE RELEVANT MARKET**

#### **A. Relevant Geographic Market**

87. The relevant geographic market is the United States. DJI considers the United States to be a single and distinct geographic market, referring to the "U.S. market" specifically in its Complaint. D.I. 1 at ¶ 8. DJI tracks sales and users in the U.S. separate from other markets.

88. DJI's online store directs users to "Select Your Country/Region" before purchasing one of its products. One of those options is the "United States English/\$ USD." DJI's online store warns users that "Products may have different prices and availability based on country/region."

89. [REDACTED]

[REDACTED]

90. U.S. consumers rarely look to purchase such drones outside of the U.S. as they may face foreign transaction fees and currency conversion markups, particularly if using a credit card. Non-U.S. purchasers seldom look to purchase drones inside the U.S. as they face similar foreign transaction fees and currency conversion markups, particularly if using a credit card.

### B. Relevant Product Market

91. The relevant product market is the market for “prosumer” drones in the United States. Prosumer drones are ready-to-fly (“RTF”) rotary-wing drones sold at prices ranging from approximately \$700 to approximately \$3,000. The chart below, prepared as equity research by Oppenheimer in early 2016, describes this distinct product market and some of its characteristics.

			
Category	Microdrones / Leisure / Toy	Prosumer	Professional / Commercial
Notable Brands	Parrot Bebop 2 Cheerson CX-10	DJI Phantom 3 Professional 3D Robotics Solo	DJI Spreading Wings S1000 sensefly eBee
Annual Shipment	>10M Units	~1M Units	<10K Units
Price Range	≤\$700	<\$3,000	≥\$3,000
Features	HD/FHD video	Gimbal, (detachable) FHD/UHD camera, range sensors	Large payload, extended range and flight time, advanced sensors

Source: Company reports, Oppenheimer & Co. Inc.

Uerkwitz, Dean, & Yang, *Drone Industry Report*, Oppenheimer (Feb. 18, 2016) at 4.

92. Prosumer drones are considered to be “mid-tier” in price and quality. Prosumer drones “combine features initially unobtainable by the mass market with consumer-friendly user

experience... [and t]hey have sophisticated and sometimes proprietary flight control software, high-end image sensors, programmability, and even rudimentary contextual awareness and autonomy.” *Id.* at 8. Prosumer drones are used for a mixture of consumer and professional purposes, hence the moniker “prosumer.” In fact, “[m]any prosumers were aspiring professional photographers [that] could not afford expensive equipment or a technically competent crew to take quality aerial images.” Wai Fong Boh, Wee-Kiat Lim and Yi Zeng, *Da Jiang Innovations (DJI): The Rise of the Drones* (Sept. 19, 2017). But, because of the quality of prosumer drones, they have been increasingly used “by content production studios, municipalities, and engineering firms.” Uerkwitz, Dean, & Yang, *Drone Industry Report*, Oppenheimer (Feb. 18, 2016) at 8.

93. Prosumer drones are ready to fly upon purchase and require minimal knowledge and experience to operate. Prosumer drones are thus distinguishable from bind-to-fly (“BNF”) drones, which require the consumer to procure, assemble, and bind a hobby-graded remote controller to the drone. BNF remote controllers are considerably more complex than an RTF controller. Prosumer drones are also distinguishable from do-it-yourself (“DIY”) drones, which are the most complicated drones to operate as they require a user to build the drone, often from a kit. A consumer seeking an RTF drone will not view a BNF or DIY drone as a substitute, as they require differing levels of user skill. RTF, BNF, and DIY drones are not interchangeable.

94. Prosumer drones are higher quality and more expensive than “leisure” or “toy” drones. Unlike prosumer drones, toy drones are typically priced between \$20 and a maximum of \$700 or lower, given that toy drones are usually priced at the lower end of that range, and although they may have a camera, they tend to be lightweight and the camera tends to be of lower quality. Toy drones are typically, 73% of the time, used for hobby and recreational purposes. Skylogic Research in *Market Sector Forecast from UAV Insider: Which Are Growing*

*and Which Aren't Panning Out* (Nov. 2, 2016). A consumer seeking a prosumer drone will not view a toy drone as a substitute in terms of quality or price. They are thus not interchangeable.

95. Prosumer drones are distinguishable from professional drones in terms of size, payload, price, quality, consumer, and intended use. Professional drones are designed to carry heavier payloads, including one of the more common uses of carrying heavier, professional grade cameras, but they are cheaper to operate than manned aircraft. They are typically purchased for enterprise use with a custom design. Thus, there is a wide variety of professional drone capabilities, from agricultural to law enforcement purposes. Because of these more exacting standards for quality and for use, professional drones usually cost more than \$3,000. Prosumer drones cannot typically perform the tasks of professional drones, and thus, consumers do not view prosumer drones as interchangeable or substitutable with professional drones.

96. Prosumer drones, which are rotary-wing, are functionally different from fixed-wing drones. Fixed-wing drones can be analogized to airplanes, generally requiring large take-off and landing areas. Due to their simpler structure, fixed-wing drones are capable of lengthier flight times and higher speeds, but they are not as agile as rotary-wing drones nor can they hover. Rotary-wing drones are more agile in the air and capable of hovering in place. These different characteristics between fixed-wing and rotary-wing drones lead to the two types of drones being used for different and distinct purposes. On the one hand, fixed-wing drones are used for tasks in which a drone must be able to cover a large distance for a longer period of time with few obstacles to maneuver around, such as in rural land surveying. Rotary-wing drones, on the other hand, are best utilized in environments requiring agility in the air or for tasks in which the drone must remain stable, such as cinematography and videography. Fixed-wing and rotary-wing

drones are not interchangeable in product use and are not considered interchangeable by consumers.

# **1. DJI Products**

97. DJI has offered a number of products in the prosumer drone market, including the Phantom and Mavic Series drones. Since 2012, DJI has introduced different generations of the Phantom, including Phantom Series 1, 2, 3 and 4 prosumer drones. There are a number of models within each Series, including the Phantom 1, Phantom 2, Phantom 2 H4-3D, Phantom 2 Vision, Phantom 2 Vision Plus, Phantom 3 4K, Phantom 3 Advanced, Phantom 3 Professional, Phantom 3 Standard, Phantom 3 SE, Phantom 4, Phantom 4 Pro, Phantom 4 Pro+, Phantom 4 Advanced, and the Phantom 4 Advanced +. In addition to the Phantom, DJI has also introduced the Mavic Series of prosumer drones, which includes the Mavic Pro, Mavic Pro Platinum, and Mavic Air.

98. DJI's Phantom and Mavic Series are prosumer drones. They are RTF rotary-wing drones of mid-tier quality priced between approximately \$700 and \$3,000 employed in a mixture of recreational and professional uses. DJI's target customers for both series are professional photographers/videographers and hobbyists that prefer higher image quality, with the top markets for usage of the Phantom prosumer drones being photography and videography.

99. DJI's prosumer drones have slight variations in appearance, capabilities, and specifications, from size and color, to flight time and flight speed, to camera quality, amongst other minor differences. Later models with higher numbers (for example, the Phantom 4 is a more recently released model compared to the Phantom 3) typically offer slight improvements to earlier models. In general, consumers view these products as interchangeable and use them for similar purposes. DJI does distinguish between some customer preferences by, for example, selling the Mavic line, which, for example, is easier for people to carry than is the Phantom.

## 2. Autel Products

100. Autel's X-Star line of drones, imported into the United States between January 2016 and October 2017, are prosumer drones. Autel's two models of the X-Star prosumer drone line are the X-Star Premium and the X-Star WiFi. These prosumer drones have slight variations in appearance, capabilities, and specifications, from size and color, to flight time and flight speed, to camera quality, amongst other minor differences. Consumers view these products as interchangeable and use them for similar purposes as the Phantom Series in particular and other prosumer drones more generally.

101. The prosumer drone market is growing rapidly in the United States, and DJI's share of that market is growing as the overall market increases. According to Grand View Research, Inc., the prosumer market is projected to grow at an estimated compound annual growth rate of "close to 30%" from 2016 to 2024. *Consumer Drone Market Will Witness Growth Based on Advent of New Innovative Technologies Till 2024*, Grand View Research (Press Release June 1, 2016).

### **ALLEGATIONS REGARDING DJI'S PREDATORY PRICING**

#### **C. DJI's Monopolization, Attempted Monopolization, and Predatory Pricing**

102. DJI has engaged in a scheme in order to harm competition and monopolize the market for prosumer drones in the United States. DJI is the dominant seller of prosumer drones in the United States. In order to augment its market share and with the intention of earning monopoly profits, DJI has lowered prices to below average variable cost at various times on various models of its Phantom line of prosumer drones. This predatorily captured market share from DJI's smaller competitors, as evidenced by their loss of market share, reductions in the size of their businesses, and—for some—their exit from the market entirely. With this increased market power and because of the high barriers to entry and structure of the prosumer drone

market, DJI will be able to recoup the costs of pricing its Phantom line of prosumer drones below average variable cost by sustaining prices at monopolistic levels.

**D. DJI's Dominance**

103. DJI possesses more than a 70% share of the prosumer drone market and was dominant from, at the latest, July 2015.

104. While “DJI is the dominant brand for drone aircraft purchases” with a 72% global share, it possessed an even more focused 87% share of “the core \$1,000-\$2,000 price segment” as of October 2017. Colin Snow, *The Current State of the Drone Industry*, Skylogic Research (Oct. 27, 2017). As of 2016, Skylogic Research estimated that DJI’s market share was over 65% for drones sold between \$1,000 to \$2,000. Miriam McNabb, *Just How Big is the Drone Market? New Skylogic and BZ Media Report*, dronelife (May 9, 2016).

105. Notably, these Skylogic Research figures even underestimate DJI’s dominant market share, as they are constructed based on unit sales, rather than dollar sales. Unit sales over-represent shares of low-priced toy drones, thus minimizing DJI’s overall market share.

106. DJI’s large share in all drones in the U.S. is reflective of its dominant share of the prosumer drone market, which constitutes the largest amount of all drone purchases in the United States, as reflected in the chart below prepared by Skylogic Research on November 2, 2016.

## Drone purchases – price points

Q. What was the price of your last drone purchase?



107. Indeed, DJI held more than a 60% share, by dollar value, of the larger U.S. consumer drone marketplace in April 2017. And, the Federal Aviation Administration published data on November 14, 2017 showing that DJI drones account for 70% of all non-hobbyist drones in the United States. In February of 2016, Oppenheimer estimated that DJI’s share of drones in the United States was 70%. Andrew Uerkwitz, Paul Dean, and Martin Yang, *Drone Industry Report*, Oppenheimer (Feb. 18, 2016) at 14.

108. DJI’s prosumer market share is reflective of its market power, and DJI is widely described as “dominating” the drone industry, including the prosumer drone market by industry analysts and reporters. *See, e.g.,* Arthur Holland Michel and Dan Gettinger, *Drone Year in Review: 2017*, Center for the Study of the Drone at Bard College, (Jan. 3, 2018) (“DJI... still dominates....”); Wai Fong Boh, Wee-Kiat Lim and Yi Zeng, *Da Jiang Innovations (DJI): The Rise of the Drones* at 9 (Sept. 19, 2017) (“[G]iven DJI’s dominance in the drone market, it remained to be seen the extent to which competitors could threaten the company in serious ways.”); Duncan Clark, *China is shaping the future of global tech*, Financial Times (Jan. 12,



2018) (“DJI is the dominant global producer of drones.”); and Don Paul Mozur, *Drone Maker D.J.I. May Be Sending Data to China, U.S. Officials Say*, The New York Times (Nov. 29, 2017) (“D.J.I. dominates the overall drone market...”).

#### **E. Predatory Pricing Schemes**

109. On information and belief, supported by material DJI has provided in discovery, in an effort to capture and protect its dominant market share, beginning in 2015, DJI began a systematic process of pricing certain models of its prosumer drones below-cost in order to target particular competitive threats.

##### **1. DJI Engages in Predatory Pricing to Take Market Share From and Drive Away 3D Robotics, Yuneec, and Other Consumer Drone Manufacturers**

110. In 2015 DJI was the dominant seller of prosumer drones in the United States. At the time, FAA Section 333 exemptions were necessary for commercial drone use in the U.S. (which includes both prosumer and professional models). DJI drones accounted for about 70% of FAA Section 333 exemptions issued from September 2014 to December 2015. As DJI advertised, their share made them “incredibly dominant among the UAV manufacturers whose products have received exemptions for commercial use.” *DJI Dominates the FAA’s List of Exemptions for Commercial Drone Use* (Press Release Aug. 7, 2015). According to the Center for the Study of the Drone at Bard College, the FAA dataset upon which these estimates were constructed was, at the time, “the most extensive and detailed source of data on which to build near-term predictions about the drone industry.” Arthur Holland Michel and Dan Gettinger, *Analysis of U.S. Drone Exemptions 2014-2015* at 1, Center for the Study of the Drone at Bard College (Mar. 16, 2016).

111. As of January 2015, DJI had released the Phantom 1, Phantom 2, and Phantom 2 Vision+. DJI released its Phantom 3 Advanced and Phantom 3 Pro in April 2015 and Phantom 3

Standard in August 2015. DJI's Phantom 3 Pro was one of the best-selling drones in the industry, described as "market dominating." Heliguy, *Yuneec Q500 4K Versus DJI Phantom 3 Pro* (Feb. 19, 2016). In fact, DJI called its Phantom 3, the "leader in its market." DJI Global (@djiglobal), Twitter (July 30, 2015, 10:39 AM), <https://twitter.com/DJIGlobal/status/626809309255569408>.

112. 3D Robotics, a third-party manufacturer, entered the prosumer drone market in 2015 with the release of the Solo. The Solo was considered a rival to DJI's Phantom 3 and they constituted "two of the most popular drone models." Courtney Jespersen, *DJI Phantom 3 Drone vs. 3D Robotics Solo Drone*, nerdwallet (Dec. 4, 2015); *see also* Heliguy, *3DR Solo Versus DJI Phantom 3* (July 13, 2015).

113. 3D Robotics' Solo represented a serious competitive threat to DJI's stranglehold on the prosumer drone market. In fact, *The Verge* said the Solo "may be the smartest drone ever," and "[d]rone followers also celebrated that there was now an alternative to the Phantom." Ryan Mac, *Behind the Crash of 3D Robotics, North America's Most Promising Drone Company*, *Forbes* (Oct. 5, 2016). *Forbes* further reported that, in response to this threat, DJI's founder and CEO Frank Wang "traveled to Berkeley to talk with [3D Robotics' founder] and offered to buy the company outright." *Id.* These reported efforts were unsuccessful but DJI found another way to eliminate 3D Robotics as an independent company and competitor: first when 3D Robotics was forced to end its sale of drones in March 2016 and then in August 2017 when it became a software supplier to DJI. April Glaser, *DJI is running away with the drone market*, *recode* (Apr. 14, 2017).

114. 3D Robotics possessed about a 7.6% share of the brand of drones issued FAA Section 333 exemptions from September 2014 to December 2015, giving it the second-largest share after DJI (although an order of magnitude smaller). Arthur Holland Michel and Dan

Gettinger, *Analysis of U.S. Drone Exemptions 2014-2015* at 8, Center for the Study of the Drone at Bard College (Mar. 16, 2016).

115. As of January 2015, Yuneec, another third-party manufacturer, had released its Typhoon Q500 prosumer drone. In June 2015, Yuneec released the Typhoon Q500 4K drone, a “potential rival to DJI’s market dominating Phantom 3 Pro[.]” Heliguy, *Yuneec Q500 4k Versus DJI Phantom 3 Pro* (Feb. 19, 2016). Yuneec possessed about a 1.9% share of the brand of drones issued FAA Section 333 exemptions from September 2014 to December 2015, giving it the third-largest share (after DJI and 3D Robotics) of firms manufacturing prosumer drones. Arthur Holland Michel and Dan Gettinger, *Analysis of U.S. Drone Exemptions 2014-2015* at 8, Center for the Study of the Drone at Bard College (Mar. 16, 2016).

116. In order to protect and expand its market share from the competitive threat that 3D Robotics, Yuneec, and other manufacturers posed, DJI priced its drones below an appropriate measure of cost, average variable cost, in 2015. In its unclassified Intelligence Bulletin, DHS noted that DJI “aggressively dropped its prices by as much as 70 percent in less than one year,” starting in 2015. U.S. Immigrations and Customs Enforcement, *Intelligence Bulletin* at 4 (Aug. 9, 2017). 3D Robotics’ CEO Chris Anderson said of DJI’s pricing that he’d “never seen a market with price declines like that.” Ryan Mac, *Behind the Crash of 3D Robotics, North America’s Most Promising Drone Company*, *Forbes* (Oct. 5, 2016). DHS specifically concluded that DJI “was able to sell category one [drones] in the United States for approximately \$900 USD. Comparatively, other [drones] with the same level of technology sold for \$3,500 USD.” U.S. Immigrations and Customs Enforcement, *Intelligence Bulletin* at 4 (Aug. 9, 2017). On information and belief, this price was below average variable cost.

**2. Round 1: DJI's 2015 Efforts to Protect and Expand Its Market Share and Exclude Competitors by Engaging in Below-Cost Pricing Succeed**

117. Prices are important to consumers in the purchase of prosumer drones, as many prosumer drones have similar capabilities and specifications.

118. DJI's predatory pricing was what led to its ability to gain, as the DHS concluded, a "monopoly" in the United States, and "[a]s a result, U.S. companies have fewer options and are more likely to purchase DJI [drones]." U.S. Immigrations and Customs Enforcement, *Intelligence Bulletin* at 4 (Aug. 9, 2017).

119. Despite the growth of the size of the relevant market, numerous competitors have been forced to reduce size or leave the market altogether due to DJI's predatory pricing.

120. In March 2016, 3D Robotics announced a round of layoffs.

121. In September 2016, 3D Robotics laid off 150 members of its staff. Former 3D Robotics president Jeevan Kalanithi wrote in an internal email that "We got knocked down for a really simple reason: We made too many Solos, especially given how fast our competitors dropped prices and flooded the market." Sally French, *Bebop-Maker Parrot To Cut a Third of Its Drone Staff*, MarketWatch (Jan. 9, 2017).

122. DJI's scheme was so successful that even manufacturers of toy drones were impacted by DJI's predatory and exclusionary behavior. [REDACTED]

[REDACTED] and in November of 2015, the Torquing Group, a manufacturer of toy drones, exited the drone industry.

**3. Round 2: DJI's Predatory Pricing upon GoPro's Entry in 2016**

**a) DJI Still Faces Competition That It Decides to Curb**

123. DJI was the dominant manufacturer of prosumer drones in early 2016. It released the Phantom 3 4K in January 2016 and the Phantom 4 in March 2016. The Phantom 4 quickly became one of DJI's most popular selling models. But competition was beginning to mount.

124. Autel entered the prosumer drone market around that time, debuting its X-Star series at the International Consumer Electronics Show on January 6, 2016. Autel's X-Star series of drones were of higher—or at the very least, similar—quality to DJI's Phantom line of drones. The X-Star drones were lauded as the “DJI Phantom 3 Killer” because of their portability, ease of control in flight, removable gimbal, and, before DJI's predatory price reductions in response, their “more affordable price.” *igeekphone.com, Preview of Autel Robotics X-Star XStar 3 RC Drone, DJI Phantom 3 Killer* (Nov. 9, 2016).

125. GoPro, Inc. (“GoPro”)—the manufacturer of the popular Hero brand of cameras—announced that it would enter the prosumer drone market in 2016 with the release of its Karma drone. GoPro's announcement was met with immediate interest by industry analysts, particularly because of GoPro's camera expertise and previous work with 3D Robotics. GoPro represented a serious competitive threat to DJI's dominance in prosumer drones.

126. Yuneec also released a new model, the Typhoon H, in May 2016. Upon its release, the Typhoon H was considered a rival to the Phantom 4. Sally French, *DJI Phantom 4 vs. Yuneec Typhoon H: Which Is Better?*, *The Drone Girl* (June 14, 2016).

**b) DJI Charged Predatory Prices, below Average Variable Cost**

127. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

128. [REDACTED]

129. On information and belief, it is highly likely that when factoring in DJI's full variable costs, more models of the Phantom line of prosumer drones in more months than listed above will be revealed as having been priced below average variable cost by DJI.

130. On information and belief, it is highly likely that documents detailing DJI's sales transaction-by-transaction, which have not been produced in discovery, will further confirm that DJI priced the models of the Phantom line of prosumer drones below cost in the months listed above and will show that DJI priced more models of the Phantom line of prosumer drones in more months than listed above below average variable cost.

**c) DJI's Efforts to Exclude Competitors Brings Immediate Successes**

131. Competitors struggled to compete with DJI's predatory pricing.

132. In March 2017, GoPro announced it would lay off 200 employees. Sally French, *Layoffs Hit Drone-Maker Yuneec, and Could be as High as 70% of U.S. Staff*, The Drone Girl (Mar. 17, 2017). As one commentator observed in reporting the 2017 lay-offs, "the consumer drone market is dominated by DJI Technology of China, and the number of players has been dwindling." Therese Poletti, *GoPro Says Sudden Job Cuts Won't Hinder Product Cycle*, MarketWatch (March 16, 2017).

133. In March 2017 Yuneec announced layoffs of roughly 50-70% of its U.S. staff. Sally French, *Layoffs Hit Drone-Maker Yuneec, and Could be as High as 70% of U.S. Staff*, The Drone Girl (Mar. 17, 2017). As of August 2017, Yuneec was reportedly unable to keep current in its payments to suppliers. Rody Rathore, *Aerial Drone Maker Yuneec Struggling to Recover from 50 Million Dollars of Revenue Deficit*, TG Daily (Aug. 10, 2017). Indeed, Yuneec's chief

executive had said in October 2016 that “DJI is crowding the market as best as they can. If I were to think about any reasons that DJI did all those price cuts, it’s for that reason.” Sally French, *How DJI has crushed the consumer drone industry, and the rivals that could still take flight*, MarketWatch (Feb. 17, 2017).

**4. Round 3: In 2017, DJI Continues Its Predatory Pricing Efforts to Squeeze Competitors from the Market**

134.

[REDACTED]

**a) DJI Sets Its Sights on GoPro and Autel**

135.

[REDACTED]

136. Additionally, DJI released the Phantom 4 Pro in November of 2016, surprising industry analysts by pricing it at “just \$100 more than what [the Phantom 4] cost when it was released.” Sally French, *DJI is OK if pricing of its newest drone ‘cannibalizes’ our own products’* (Nov. 15, 2016).

[REDACTED]

[REDACTED]

137.

[REDACTED]

[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

138. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

139. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

140. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

141. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**b) In 2017, DJI Succeeds in Eliminating Competitors**

142. Despite the growth of the size of the relevant market, numerous competitors have been forced to reduce size or leave the market altogether due to DJI's predatory pricing.

143. Faced with predatory prices, Autel could not profitably sell the X-Star products. Autel was forced to price below its own cost to respond to DJI's predatory pricing scheme.

144. Autel ended imports of X-Star drones into the United States in October 2017. Thereafter, Autel sold its remaining inventory and only sold refurbished X-Star prosumer drones.

145. In January 2018, GoPro Inc. left the drone business.

**F. Through Its Pattern of Predatory Conduct, DJI Maintained and Expanded Its Market Share**

146. DJI's strategy of reducing prices to gain market share, and thus market power, worked. For example, [REDACTED]

[REDACTED]

147. DJI has at least maintained its dominant share of the prosumer drone market. Skylogic Research estimates that in 2017 DJI held a 72% share of drones priced between \$500 and \$1000 and held nearly 70% of the market for drones priced between \$1000 and \$2000. *Drone market share analysis & predictions for 2018*, DronesGlobe (Dec. 24, 2017); *see also 2018 Commercial Drone Industry Trends*, DroneDeploy (May 2018).

148. DJI is still regarded as the "dominant" player in drones. *Drone market share analysis & predictions for 2018*, DronesGlobe (Dec. 24, 2017).

149. Autel has attempted to re-enter the market with the release of its EVO drone in June 2018. Autel's attempted re-entry is coupled with these counterclaims, which seek to put an end to DJI's anti-competitive conduct and to allow Autel's EVO to compete on a level playing ground. Of course, the EVO drone currently has at best a minimal market share.

**G. There Is a Dangerous Probability that DJI Will Be Able to Recoup Because of the Structure of the Market and Barriers to Entry**

150. In May 2015, DJI's founder looked down the road three years, to 2018. He predicted that the drone industry this year would be low-margin. Why? He explained that "that all depends on DJI's pace. If DJI wants the industry to be low-margin, it will be low-margin, If DJI wants it to stay high-margin, then that will remain the case for a bi[t] longer." Heng Shao, *Drone Overlord Frank Wang on DJI's Milestones, Miscarried GoPro Partnership & Corporate Espionage*, Forbes (May 7, 2015).

151. DJI has fulfilled its founder's objective. It has established a durable monopoly, free to dictate the competitive conditions of the prosumer market to its competitors, at the expense of its customers and consumers generally.

152. DJI will be able to sustain supra-competitive pricing in the relevant market because no other competitor can enter the market or expand in time to prevent DJI from raising prices, recouping its costs, and harming consumers. This harm will continue unless and until DJI's anti-competitive acts are stopped.

**1. Barriers to Entry and Expansion Are High**

153. The barriers to entry are high in the prosumer drone market. Designing prosumer drones requires software and hardware expertise, as well as expertise in other highly technical fields, such as cameras, computer vision, deep learning, and artificial intelligence. DJI admits the learning curve is steep and barriers to entry high, stating that "creating a new drone is much

harder than creating a new phone or camera.” Wai Fong Boh, Wee-Kiat Lim and Yi Zeng, *Da Jiang Innovations (DJI): The Rise of the Drones*, Nanyang Business School (Sept. 19, 2017) at 9.

154. Manufacturing drones is difficult and resource-intensive. Indeed, DJI believes its competitiveness is “because its products, especially its core flight controller technology, were based on millions of flight hours [of testing], *a feat that would be difficult for new entrants to replicate.*” Wai Fong Boh, Wee-Kiat Lim and Yi Zeng, *Da Jiang Innovations (DJI): The Rise of the Drones*, Nanyang Business School (Sept. 19, 2017) at 9 (attributed to DJI) (emphasis added).

155. DJI’s economies of scale present another high barrier because any new entrant will be forced to come in at large scale at great risk or come in at a small scale and face a significant cost disadvantage. 3D Robotics, an aspiring entrant based in Silicon Valley led by the former editor of Wired and head of DJI North America, serves as a cautionary tale to anyone considering the former approach. In 2015, 3D Robotics sunk at least \$64 million dollars into manufacturing and produced 100,000 of its first line of prosumer “Solo” drones. Despite positive reviews, by the end of the year, 3D Robotics had only sold about 22,000 units, “leaving a significant backlog of inventory that sat on factory floors and shipping containers.” As reported by Forbes magazine:

*DJI also began to turn the screw.* While a Solo with a gimbal and GoPro camera cost more than \$1,700, the vertically integrated Chinese company, which controlled its own factories and already sold its comparable Phantom 3 Professional package for \$1,300, *aggressively slashed prices.* By 2016, that Phantom with a gimbal and camera cost \$1,000.

“I’d never seen a market with price declines like that,” said [Chris] Anderson [the former editor of Wired]. “*Everybody other than DJI lost.*”

*With DJI dropping the bottom out of the market, Anderson and his executives had no breathing room. . . .*

*In less than a year, 3D Robotics' resources were decimated by its dependence on Solo. By February, the company had more than 60,000 unsold drones and with no money, it shuttered its San Diego office and Tijuana factory."* Ryan Mac, *Behind the Crash of 3D Robotics, North America's Most Promising Drone Company*, *Forbes* (Oct. 5, 2016) (emphasis added). This barrier will remain so long as DJI remains a dominant player.

156. In addition, DJI's dominance and past predatory pricing practices will represent a threat to any company considering large-scale entry because any such company knows that if it becomes too much of a threat, DJI will just price predatorily and drive it from the market. That is what happened to 3D Robotics. It is also what happened to Autel. Unlike 3D Robotics, Autel had the benefit of being located in Shenzhen (near many suppliers of drone components) with its own manufacturing facilities and expertise, which gave it the ability to produce high-quality prosumer drones at prices lower than 3D Robotics. No matter. Still, as described above, DJI aggressively slashed prices again and Autel never made a profit on its X-Star line of drones. The same will happen to other aspiring entrants so long as DJI remains dominant and so long as it can engage in predatory pricing.

157. DJI's dominance deters potential investors in aspiring entrants or competitors to DJI seeking to expand. That is why investments in the drone industry have shrunk despite the industry growing from 2015 to 2016. Skylogic Research reported that "[a]s DJI dominates camera and commercial drone sales, funding for drone aircraft falls." Colin Snow, *Drone Market Forecasts: Promises and Reality*, Skylogic Research (May 4, 2017).

## **2. Competitors Will Not Be Able to Increase Output Sufficiently and Quickly Enough To Stop DJI from Recouping Its Predatory Pricing**

158. Second, the structure of the prosumer drone market is such that no other competitor can, while DJI remains a dominant player, expand in time to compete away DJI's

recoupment scheme when DJI prices supra-competitively. DJI “dominates the market” and “[n]o other brand comes close,” according to the research group Futuresource Consulting. Tim Bradshaw, *Drone makers battle to deliver on expectations*, Financial Times (Mar. 15, 2018).

159. Moreover, companies selling product in geographic markets adjacent to the prosumer drone market will not be able to enter or expand in the U.S. prosumer drone market. Both the high barriers to entry, and DJI’s total dominance in all civilian drone sales globally—and not just in prosumer drones in the U.S.—has limited these companies’ ability to expand. First, DJI’s dominance is worldwide. DJI is the “undisputed leader in the civilian drone world.” Louise Lucas, *World’s biggest drone market DJI eyes move to commercial applications*, Financial Times (Aug. 10, 2017). DJI advertises its global dominance, pointing out its “70% [] global market share” in “consumer drones” and sales in “over 100 countries and regions around the world.” *DJI Affiliate Program*, [https://u.dji.com/dji-affiliate-program/index\\_en.html](https://u.dji.com/dji-affiliate-program/index_en.html) (last visited August 8, 2018). Second, this dominance is also in the sale of all drones, not just prosumer drones. As demonstrated above, toy drone competitors like Parrot have lost share to DJI in the price bands in which they operate.

## **H. DJI’s Intent**

160. On information and belief, DJI acted with the intent to monopolize the relevant market. That specific intent is demonstrated by the pattern of predatory pricing and conduct targeted towards competitive threats on an on-going basis and without a legitimate business purpose. Further, DJI’s founder and CEO Frank Wang revealed DJI’s intent to use its size and strength to drive others out of business, saying about 3D Robotics in an interview with Forbes: “It’s easier for them to fail... They have money, but I have even more money and am bigger and have more people.” In fact, Forbes stated that Wang “doesn’t want to share the skies with others, [he is] intent on maintaining DJI’s lead as drones expand into commercial applications.” Ryan

Mac, Heng Shao, and Frank Bi, *Bow to Your Billionaire Drone Overlord: Frank Wang's Quest To Put DJI Robots into the Sky*, Forbes (May 6, 2015).

161. On information and belief, DJI acted with the desire and purpose of injuring competitors in the relevant market and destroying competition in the relevant market.

162. On information and belief, DJI had no valid business justification for its anticompetitive conduct. DJI did not lower its prices to match the pricing of a competitor's prices for a prosumer drone of similar quality in the relevant market.

**ANTITRUST STANDING, INJURY-IN-FACT AND ANTITRUST INJURY**

163. Autel is a proper party to seek redress under Sections 4 and 16 of the Clayton Act, 15 U.S.C. §§ 15 and 26, because it is a person and a corporation within the meaning of the Clayton Act, a competitor in the relevant market, which has been restrained and monopolized, and Autel has suffered antitrust injury. Autel has been an active participant in the prosumer drone market and it has suffered lost revenue, lost sales, lost profits and lost opportunities as a direct result of DJI's anti-competitive acts. Because of DJI's predatory pricing scheme, Autel lost sales and profits in the prosumer drone market, losing significant share to DJI. This preclusion from being able to compete free from predatory and exclusionary conduct is exactly the kind of harm that the Sherman Act is designed to prevent, flowing from that which makes DJI's acts unlawful. Indeed, consumers were harmed as well because they were presented with fewer choices in a market that would have expanded more quickly had companies been able to bring newer, better innovations to market and to compete free of DJI's conduct.

164. There is no potential for duplicative recovery or an apportionment of damages, nor a more direct victim of the challenged conduct that is likely to seek redress for the violations.

165. There is a direct, causal relationship between the challenged conduct and Autel's injuries, and those injuries are neither tenuous nor speculative. Absent DJI's anticompetitive

scheme to restrain trade and monopolize the relevant market, Autel could have increased its size, profitability, market share, and market value.

166. On information and belief, the injury flowing from DJI's unlawful conduct is continuing and, absent judicial action, will continue.

**FIRST COUNTERCLAIM**  
**(Declaratory Judgment of Non-Infringement of the '040 Patent)**  
**(Against DJI SZ and DJI BV)**

167. Autel realleges and incorporates by reference the allegations set forth in the preceding Paragraphs 52 through 166 as if fully set forth herein.

168. An actual and justiciable case or controversy exists between Autel and DJI SZ and DJI BV as to the non-infringement of the '040 patent, as evidenced by the Complaint in this action and Autel's Answer to that Complaint, set forth above. Absent a declaration of non-infringement, DJI SZ and DJI BV will continue to wrongfully allege infringement of the '040 patent against Autel and thereby cause Autel injury and damage.

169. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Autel requests a declaration that Autel's accused products do not currently infringe and have not infringed any claim of the '040 Patent.

**SECOND COUNTERCLAIM**  
**(Declaratory Judgment of Non-Infringement of the '744 Patent)**  
**(Against DJI SZ and DJI BV)**

170. Autel realleges and incorporates by reference the allegations set forth in the preceding Paragraphs 52 through 169 as if fully set forth herein.

171. An actual and justiciable case or controversy exists between Autel and DJI SZ and DJI BV as to the non-infringement of the '744 patent, as evidenced by the Complaint in this action and Autel's Answer to that Complaint, set forth above. Absent a declaration of non-



infringement, DJI SZ and DJI BV will continue to wrongfully allege infringement of the '744 patent against Autel and thereby cause Autel injury and damage.

172. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Autel requests a declaration that Autel's accused products do not currently infringe and have not infringed any claim of the '744 Patent.

**THIRD COUNTERCLAIM**  
**(Declaratory Judgment of Invalidity of the '040 Patent)**  
**(Against DJI SZ and DJI BV only)**

173. Autel realleges and incorporates by reference the allegations set forth in the preceding Paragraphs 52 through 172 as if fully set forth herein.

174. An actual and justiciable case or controversy exists between Autel and DJI SZ and DJI BV as to the invalidity of the '040 patent, as evidenced by the Complaint in this action and Autel's Answer to that Complaint, set forth above. Absent a declaration of invalidity, DJI SZ and DJI BV will continue to wrongfully allege infringement of the '040 patent against Autel and thereby cause Autel injury and damage.

175. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Autel requests a declaration that the '040 patent is invalid and therefore cannot be asserted against Autel.

**FOURTH COUNTERCLAIM**  
**(Declaratory Judgment of Invalidity of the '744 Patent)**  
**(Against DJI SZ and DJI BV only)**

176. Autel realleges and incorporates by reference the allegations set forth in the preceding Paragraphs 52 through 175 as if fully set forth herein.

177. An actual and justiciable case or controversy exists between Autel and DJI SZ and DJI BV as to the invalidity of the '744 patent, as evidenced by the Complaint in this action and Autel's Answer to that Complaint, set forth above. Absent a declaration of invalidity, DJI

will continue to wrongfully allege infringement of the '744 patent against Autel and thereby cause them injury and damage.

178. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Autel requests a declaration that the '744 patent is invalid and therefore cannot be asserted against Autel.

**FIFTH COUNTERCLAIM**  
**(Infringement of U.S. Patent No. 7,979,174)**

179. Robotics USA realleges and incorporates by reference the allegations set forth in the preceding Paragraphs 52 through 178 as if fully set forth herein.

180. The '174 patent, entitled "Automatic Planning and Regulation of the Speed of Autonomous Vehicles," was duly and lawfully issued by the U.S. Patent and Trademark Office ("USPTO") on July 12, 2011. A true and correct copy of the '174 patent is attached hereto as Exhibit A.

181. Robotics USA is the owner of all rights, title, and interest in the '174 patent.

182. One of the features of the UAVs or "drones" that have proliferated the skies is the ability to fly along a predetermined path at a predetermined speed. The UAV does this by accepting a flight path from a user, and then by using sensors to make sure that the UAV stays on the predetermined path at a determined speed by taking the inputs from the sensors, such as the strength of headwinds and/or tailwinds, and accordingly adjusting the speed of the actuators spinning the rotors to adjust the speed of the UAV. Figure 1 of the '174 patent illustrates this process and has been reproduced below:

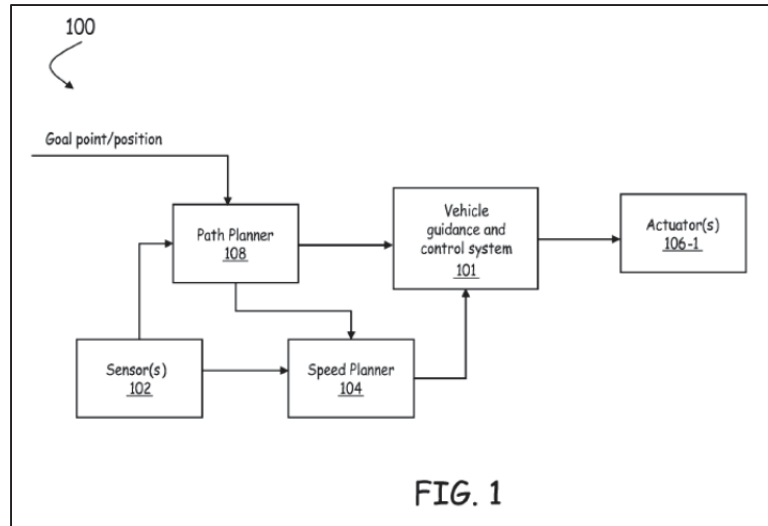


Figure 1. Fig. 1 of the '174 Patent

183. DJI manufactures and sells UAV products throughout the world, including within the United States. These currently include at least four different series, as illustrated in the chart below (collectively, “the Accused Products”):

Series	Products
Mavic	Mavic Air, Mavic Pro, Mavic Pro Platinum
Spark	Spark
Phantom	Phantom 3 SE, Phantom 4 Pro, Phantom 4 Advanced
Inspire	Inspire 2

184. A photographic example of each product series has been produced below:



Figure 2. DJI Mavic



Figure 3. DJI Spark



Figure 4. DJI Phantom 4



Figure 5. DJI Inspire 2

185. Each of the Accused Products manufactured and sold by DJI includes each and every element of at least claim 1 of the '174 patent.

186. Claim 1 of the '174 patent has been reproduced below:

1. An autonomous vehicle comprising:
  - one or more sensors configured to obtain data regarding conditions which affect movement of the autonomous vehicle;
  - a speed planner coupled to the one or more sensors and configured to calculate a desired speed based, at least in part, on the data obtained from the one or more sensors;
  - a control system configured to calculate speed commands based, at least in part, on the speed calculated by the speed planner; and
  - one or more actuators configured to adjust the speed of the autonomous vehicle based on the speed commands from the control system;wherein the speed planner is further configured to output a speed command category associated with the desired speed.

187. Each of the Accused Products manufactured and sold by DJI is an autonomous vehicle comprising one or more sensors configured to obtain data regarding conditions which affect its movement and includes a speed planner coupled to the one or more sensors and configured to calculate a desired speed based in part on the data obtained from the one or more sensors. By way of example, the Accused Products implement a speed planner coupled to the one or more sensors through obstacle avoidance and automatic braking. This allows the Accused Products to slow their forward progress when an obstacle is sensed by UAV.

188. The Mavic Pro includes “Assisted Braking from Forward Vision System” which allows the UAV to intelligently brake when it senses an object ahead of it:

**Assisted Braking from Forward Vision System**

Powered by the Forward Vision System, the aircraft is able to actively brake when obstacles are detected in front. Forward and Downward Vision Systems work best when lighting is adequate and the obstacle is clearly marked or textured. The aircraft must fly at no more than 22mph (36kph) to allow sufficient braking distance.

The Spark also includes a form of assisted braking:

Powered by the 3D Sensing System, the aircraft is able to actively brake when obstacles are detected in front. The 3D Sensing System works best when lighting is adequate and the obstacle is clearly marked or textured. The aircraft must fly at no more than 6.7 mph (10.8 kph) to allow for sufficient braking distance.

The Phantom describes its assisted braking system as “Assisted Braking from Obstacle Sensing”:

**Assisted Braking from Obstacle Sensing**

Powered by the Obstacle Sensing, the aircraft will now be able to actively brake when obstacles are detected around the aircraft. Note that Obstacle Sensing function works best when lighting is adequate and the obstacle is clearly marked or textured. The aircraft must fly at no more than 31mph (50kph) to allow sufficient braking distance.

The Inspire 2 also refers to its assisted braking as “Assisted Braking from Obstacle Sensing”:

**Assisted Braking from Obstacle Sensing**

Powered by the Obstacle Sensing, the aircraft will now be able to actively brake when obstacles are detected around the aircraft. Note that Obstacle Sensing function works best when lighting is adequate and the obstacle is clearly marked or textured. The aircraft must fly at no more than 31mph (50kph) to allow sufficient braking distance.

189. Each of the Accused Products includes a control system configured to calculate speed commands based in part on the speed calculated by the speed planner. Additionally, the Accused Products include one or more actuators configured to adjust the speed of the autonomous vehicle based on the speed commands from the control system wherein the speed planner is further configured to output a speed command category associated with the desired speed. The Accused Products perform this step through their respective flight control modules, which take the inputs from the obstacle avoidance systems and speed planners and outputs speed commands to the electronic speed control (ESC) systems controlling each of the rotors.

190. Without license or authority and in violation of 35 U.S.C. § 271(a), DJI makes, uses, offers to sell, and/or sells within the United States, and/or imports into the United States the Accused Products, which include each and every element, either literally or under the Doctrine of Equivalents, of at least claim 1 of the '174 patent.

191. Without license or authority and in violation of 35 U.S.C. § 271(b), DJI actively induces the making, using, offering to sell, and/or selling within the United States, and/or importing into the United States the Accused Products, which include each and every element, either literally or under the Doctrine of Equivalents, of at least claim 1 of the '174 patent.

192. Without license or authority and in violation of 35 U.S.C. § 271(c), DJI offers to sell, sells, and/or imports into the United States a component of a patented apparatus constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent and which is not a staple article or commodity of commerce for substantial noninfringing use.

193. DJI's infringement of the '174 patent has caused and will continue to cause Robotics USA irreparable injury and harm for which there is no adequate remedy at law unless and until DJI is permanently enjoined by this Court from infringing the '174 patent.

194. Robotics USA is entitled to recover from DJI the damages it has sustained as a result of DJI's infringing activities in an amount subject to proof at trial, including but not limited to lost profits and not less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

195. This is an exceptional case under 35 U.S.C. § 285, and Robotics USA is entitled to enhanced damages, attorneys' fees, and litigation expenses incurred.

**SIXTH COUNTERCLAIM**  
**(Infringement of U.S. Patent No. 9,260,184)**

196. Robotics USA realleges and incorporates by reference the allegations set forth in the preceding Paragraphs 52 through 195 as if fully set forth herein.

197. The '184 patent, entitled "Compact Unmanned Rotary Aircraft," was duly and lawfully issued by the USPTO on February 16, 2016. A true and correct copy of the '184 patent is attached hereto as Exhibit B.

198. Robotics USA is the owner of all rights, title, and interest in the '184 patent.

199. For stability of a multi-rotor UAV, it is important to have different rotors operate in different directions, clockwise and counterclockwise. Because of this, a quadcopter must have two clockwise spinning rotors and two counterclockwise spinning rotors, which will negate the torque being placed on the UAV by the spinning rotors and lead to the stability of the craft.

Figure 1 of the '184 patent depicts the rotation of the rotors and has been reproduced below:

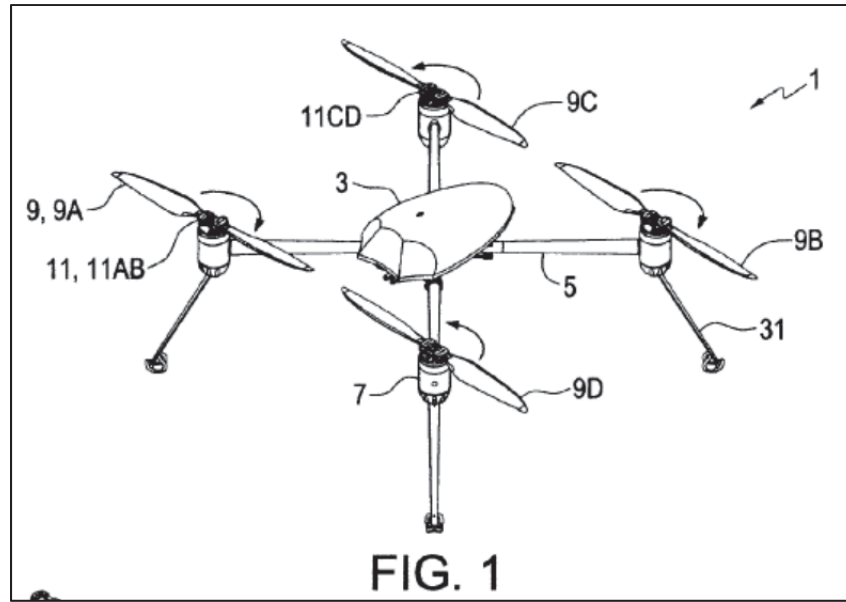
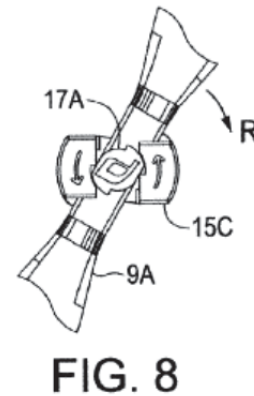
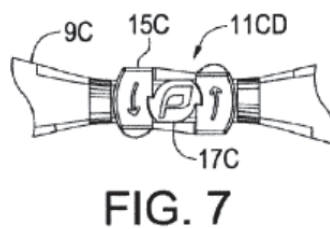
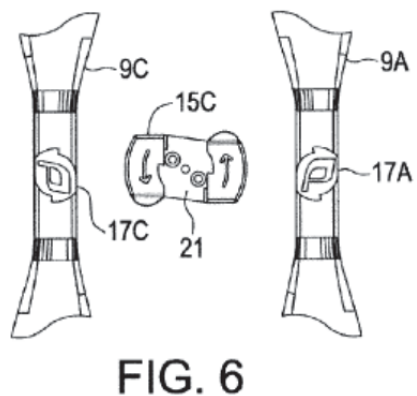


Figure 6. Fig. 1 of the '184 Patent

200. The '184 patent is generally directed to a UAV with rotors that can be removably coupled to the UAV through a clockwise/counterclockwise locking mechanism that only allows the correct rotor to be attached to the corresponding electric motor of the UAV. This allows the rotors configured to spin clockwise to only be able to lock to the UAV motors configured to spin rotors clockwise, and allows the rotors configured to spin counterclockwise to only be able to lock to the UAV motors configured to spin rotors counterclockwise. Figures 6, 7, and 8 of the '184 patent illustrate this one-way locking mechanism and have been reproduced below:





201. Each of the Accused Products manufactured and sold by DJI includes each and every element of at least claim 1 of the '184 patent.

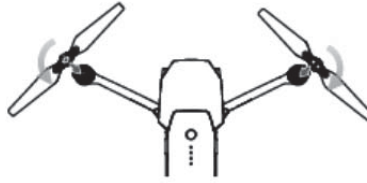
202. Claim 1 of the '184 patent has been reproduced below:

1. A rotary wing aircraft apparatus comprising:
  - a body;
  - a plurality of arms extending laterally from the body, and a rotor assembly attached to an outside end of each arm;
  - each rotor assembly comprising a rotor blade releasably attached to a driveshaft by a lock mechanism, and a drive rotating the driveshaft;
  - wherein a first driveshaft rotates in a clockwise direction and a second driveshaft rotates in a counterclockwise direction;
  - wherein a clockwise rotor blade is releasably attached to the first driveshaft by engagement in a clockwise lock mechanism and generates a vertical lift force when rotated in the clockwise direction, and a counterclockwise rotor blade is releasably attached to the second driveshaft by engagement in a counterclockwise lock mechanism and generates a lift force when rotated in the counterclockwise direction;
  - wherein the clockwise rotor blade is engageable only with the clockwise lock mechanism and cannot be engaged in the counterclockwise lock mechanism, and the counterclockwise rotor blade is engageable only with the counterclockwise lock mechanism and cannot be engaged in the clockwise lock mechanism; and
  - wherein the clockwise lock mechanism comprises a shaft lock portion attached to the first driveshaft and a blade lock portion attached to the clockwise rotor blade, the shaft lock portion defining notches configured to engage corresponding lugs on the blade lock portion.

203. Each of the Accused Products includes a body with a plurality of arms extending laterally from the body with a rotor assembly attached to an outside end of each arm. This can be seen in Figures 1–4 above.




204. Each of the Accused Products includes a rotor assembly comprising a rotor blade releasably attached to a driveshaft by a lock mechanism with a drive rotating the driveshaft, one of which is rotating in a clockwise direction and another of which is rotating in a counterclockwise direction, both of which generate lift force when rotated in their respective directions.

The specific directionality of the rotors is shown in the Mavic Pro User Manual, but is representative of all of the Accused Products:






205. Each of the Accused Products includes a lock mechanism that selectively allows the correct rotor to engage with its corresponding driveshaft—clockwise rotor to clockwise driveshaft and counterclockwise rotor to counterclockwise driveshaft.





206. The Mavic Pro utilizes “white rings” on its rotors to distinguish between those that go clockwise and those that go counterclockwise:

Attaching and Detaching the Propellers		
Use only DJI approved propellers with your Mavic Pro. White ring and unmarked propellers indicate where they should be attached and in which direction they should spin.		
Propellers	White Ring	Unmarked
Figure		
Attach On	Motors with white marks	Motors without white marks
Legends	 Lock : Turn the propellers in the indicated direction to mount and tighten.	

The Spark User Manual includes a similar graphic as it also utilizes white rings to differentiate between the rotors that are configured to spin clockwise and those that are configured to spin counterclockwise:

Propellers	White Ring	Unmarked
Figure		
Attach On	Motors with white marks	Motors without white marks
Legend	 Lock : Turn the propellers in the indicated direction to mount and tighten.	

Similarly, the Phantom 4 differentiates between clockwise and counterclockwise rotors by using silver and black rings with black dots:

Propellers	Silver Ring	Black Ring
Figure		
Attach On	Motors without black dots	Motors with black dots
Legends	 Lock : Turn the propellers in the indicated direction to mount and tighten.  Unlock : Turn the propellers in the indicated direction to loosen and remove.	

The Inspire 2 User Manual differentiates between clockwise and counterclockwise motors by the motor/rotor colors as well:

1. Pair the propellers and motors with arrows of the same color (red or white).

207. Each of the Accused Products includes a lock mechanism that has a shaft lock portion attached to the first driveshaft and a blade lock portion attached to the clockwise rotor blade, the shaft lock portion defining notches configured to engage corresponding lugs on the blade lock portion.

208. The Mavic Pro User Manual clearly shows the notches of the shaft lock portion and the lugs on the blade lock portion:



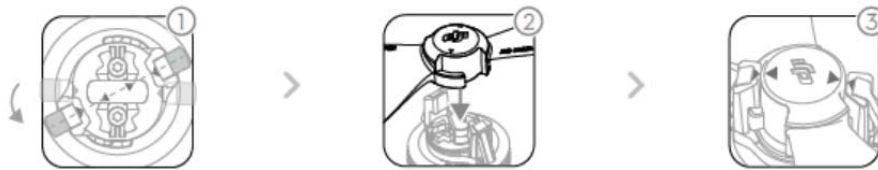
The Spark User Manual also clearly shows the notches of the shaft lock portion and the lugs on the blade lock portion:



The Phantom 4 User Manual also shows the notches that would attach to the lugs on the blade lock portion:



Similarly, the Inspire 2 User Manual also shows the notches and lugs:



209. Without license or authority and in violation of 35 U.S.C. § 271(a), DJI makes, uses, offers to sell, and/or sells within the United States and/or import into the United States the Accused Products, which include each and every element, either literally or under the Doctrine of Equivalents, of at least claim 1 of the '184 patent.

210. Without license or authority and in violation of 35 U.S.C. § 271(b), DJI actively induces the making, using, offering to sell, and/or selling within the United States and/or importing into the United States the Accused Products, which include each and every element, either literally or under the Doctrine of Equivalents, of at least claim 1 of the '184 patent.

211. Without license or authority and in violation of 35 U.S.C. § 271(c), DJI offers to sell, sells, and/or imports into the United States a component of a patented apparatus constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent and which is not a staple article or commodity of commerce for substantial noninfringing use.

212. DJI's infringement of the '184 patent has caused and will continue to cause Robotics USA irreparable injury and harm for which there is no adequate remedy at law unless and until DJI is permanently enjoined by this Court from infringing the '184 patent.

213. Robotics USA is entitled to recover from DJI the damages it has sustained as a result of DJI's infringing activities in an amount subject to proof at trial, including but not limited to lost profits and not less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

214. This is an exceptional case under 35 U.S.C. § 285, and Robotics USA is entitled to enhanced damages, attorneys' fees, and litigation expenses incurred.

**SEVENTH COUNTERCLAIM**  
**(Monopolization in Violation of Sherman Act § 2, 15 U.S.C. § 2)**

215. Autel realleges and incorporates by reference the allegations set forth in Paragraphs 52 through 214 above as if fully set forth herein.

216. DJI has monopoly power in the relevant market, maintaining a market share of at least 70% in a market characterized by substantial barriers to entry and few and small competitors with limited capacity to expand and manufacture drones in greater numbers.

217. DJI is maintaining and expanding its monopoly power through predatory and exclusionary conduct described above, in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

218. There is no legitimate business justification for DJI's monopolization conduct.

219. DJI's anticompetitive conduct has had a significant adverse effect on competition in the relevant market, causing harm to consumers by reducing consumer choice, stifling innovation, and anti-competitively injuring other prosumer drone manufacturers and forcing most into bankruptcy in the past several years.

220. The anticompetitive actions by DJI have directly injured Autel in its business and property and its injuries and damages are ongoing.

221. Autel was injured in fact by the monopolization of DJI because Autel was unable to match the unlawful prices offered by DJI, losing millions of dollars in sales.

222. Autel has suffered an antitrust injury as a direct and proximate result of DJI's monopolization and DJI is therefore liable for treble damages, costs, and attorneys' fees in an amount to be proved at trial.

#### **EIGHTH COUNTERCLAIM**

##### **(Attempted Monopolization in Violation of Sherman Act § 2, 15 U.S.C. § 2)**

223. Autel realleges and incorporates by reference the allegations set forth in Paragraphs 52 through 222 above as if fully set forth herein.

224. Through the actions described above, DJI has engaged in anti-competitive and exclusionary conduct in an attempt to monopolize the relevant market, in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

225. DJI has engaged in the anticompetitive, predatory, and exclusionary acts described above with the specific intent to monopolize the relevant market, and there is a dangerous probability that DJI would succeed in its attempt to do so by virtue of its market power, the structure of the market, and barriers to entry set forth above.

226. DJI's anticompetitive, predatory, and exclusionary conduct has had and will continue to have a significant adverse effect on competition in the relevant market, causing harm to consumers by reducing consumer choice, stifling innovation, and anti-competitively injuring other prosumer drone manufacturers and forcing them into bankruptcy in the past several years.

227. The anticompetitive actions by DJI have directly injured Autel in its business and property and its injuries and damages are ongoing.

228. Autel was injured in fact by the attempted monopolization of DJI because Autel was unable to match the unlawful prices offered by DJI, losing millions of dollars in sales.

229. Autel has suffered an antitrust injury as a direct and proximate result of DJI's monopolization and DJI is therefore liable for treble damages, costs, and attorneys' fees in an amount to be proved at trial.

**NINTH COUNTERCLAIM**  
**(Predatory Pricing in Violation of Sections 17043 and 17044 of the California Unfair Practices Act, Cal. Bus. & Prof. Code § 17000, *et seq.*)**

230. Autel realleges and incorporates by reference the allegations set forth in Paragraphs 52 through 229 above as if fully set forth herein.

231. California Business and Professions Code section 17043 prohibits any person engaged in business in California from selling or offering to sell "any article or product at less than the cost thereof to such vendor, or to give away an article or product, for the purpose of injuring competitors or destroying competition."

232. DJI is engaged in business in California, and has sold or offered to sell its prosumer drones at below-cost prices to customers for the purposes of injuring Autel, destroying fair competition in the market, and gaining monopoly power.

233. Average cost is calculated by summing the cost for each DJI product sold and then dividing this sum by the quantity of each DJI product sold. Average cost, in economic terms, is the average total cost, and thus reflects all variable and fixed costs. By definition, any pricing below average variable cost must be below average total cost.

234. On information and belief, it is highly likely that when factoring in DJI's full variable costs and full fixed costs, more models of the Phantom line of prosumer drones in more months than listed above will be revealed as having been priced below average cost by DJI.

235. DJI has sold or offered to sell its prosumer drones at less than cost with the effect of diverting trade from and otherwise injuring competition.

236. DJI's predatory pricing of prosumer drones violates sections 17043 and 17044 of the California Business and Professions Code.

237. Autel has suffered injury to its business as a result of DJI's sales and offers to sell its prosumer drones below cost, and DJI therefore is liable for treble damages, costs, and attorneys' fees in an amount to be proved at trial pursuant to California Business and Professional Code section 17082.

**TENTH COUNTERCLAIM**

**(Predatory Pricing in Violation of Section 481-3 of the Hawaii Unfair Practices Act, Haw. Rev. Stat. §§ 481-1, *et seq.*)**

238. Autel realleges and incorporates by reference the allegations set forth in Paragraphs 52 through 237 above as if fully set forth herein.

239. Hawaii Revised Statutes section 481-3 prohibits any person engaged in business in Hawaii from selling or offering to sell any product "at less than the cost thereof to such vendor... with the intent to destroy competition."

240. DJI is engaged in business in Hawaii, and has sold or offered to sell its prosumer drones at below-cost prices to customers for the purposes of injuring Autel, destroying fair competition in the market, and gaining monopoly power. Autel is engaged in business in Hawaii, and has sold its prosumer drones there.

241. Hawaii's definition of the "cost thereof" includes the cost of "raw materials, labor, and all overhead expenses." Overhead expenses "means all costs of doing business incurred in the conduct of the business and includes without limitation the following items of expense: labor (including salaries of executive officers), rent, interest on borrowed capital, depreciation, selling cost, maintenance of equipment, delivery costs, credit losses, all types of



licenses, taxes, insurance, and advertising.” Haw. Rev. Stat. §§ 481-3. These costs include all COGS, all variable costs, and some fixed costs. By definition, any pricing below average variable cost or COGS must be below Hawaii’s statutory measure of cost.

242. On information and belief, it is highly likely that when factoring in DJI’s full variable costs and full fixed costs, more models of the Phantom line of prosumer drones in more months than listed above will be revealed as having been priced below Hawaii’s statutory measure of cost by DJI.

243. DJI has sold or offered to sell its prosumer drones at less than cost with the effect of diverting trade from and otherwise injuring competition.

244. DJI’s predatory pricing of prosumer drones violates section 481-3 of Hawaii Revised Statutes. DJI’s predatory pricing of prosumer drones is not permitted by section 481-6 of Hawaii Revised Statutes.

245. Autel has suffered injury to its business as a result of DJI’s sales and offers to sell its prosumer drones below cost, and DJI therefore is liable for treble damages, costs, and attorneys’ fees in an amount to be proved at trial pursuant to Hawaii Revised Statutes section 481-10.

**ELEVENTH COUNTERCLAIM**  
**(Infringement of U.S. Patent No. 9,979,000)**

246. Robotics USA realleges and incorporates by reference the allegations set forth in the preceding Paragraphs 52 through 245 as if fully set forth herein.

247. The ’000 patent, entitled “Battery Used for Unmanned Aerial Vehicle and an Unmanned Aerial Vehicle,” was duly and lawfully issued by the USPTO on May 22, 2018. A true and correct copy of the ’000 patent is attached hereto as Exhibit C.

248. Robotics USA is the owner of all rights, title, and interest in the ’000 patent.

249. Every UAV includes a power source, which enables the UAV to fly. Many UAVs utilize a battery pack as its power source.

250. The '000 patent is generally directed towards a battery used by UAVs that includes a clamp button fixed on the shell of the battery that allows the battery to be detachably coupled with the main body of a UAV. This battery with a clamp button makes it very convenient to change the batteries of the UAV as the battery pack can be easily removed by pressing the clamp button, and a new battery can be inserted, which will again engage the clamp button of the respective battery when pushed into place. Figure 1 of the '000 patent illustrates the removability of the battery and how it can slide into the main body of the UAV:

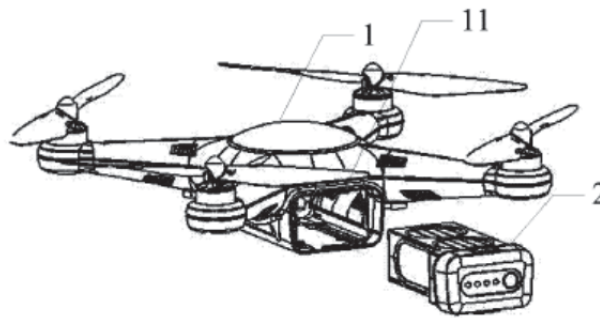


Fig.1

Figure 7. Figure 1 of the '000 patent

251. Figure 4 of the '000 patent illustrates how the clamp button works and engages with the body of the UAV:

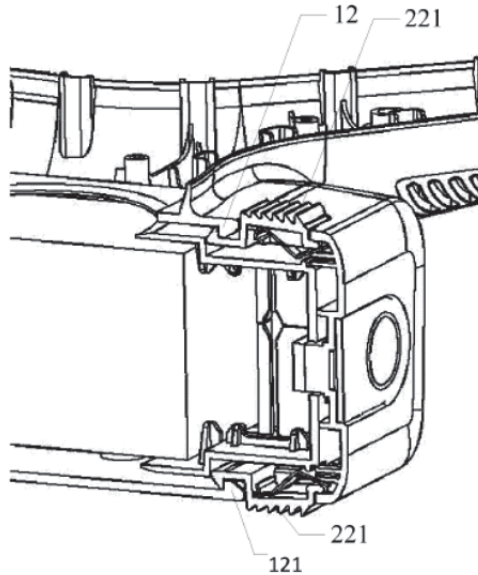


Fig.4

Figure 8. Figure 4 of the '000 patent

252. The clamp button has been labeled 221 in the above figure, and the clamping of the clamp button of the battery to the clipper of body of the UAV has been labeled as 12.

253. Each of the Accused Products include each and every element of at least claim 1 of the '000 patent.

254. Claim 1 of the '000 patent has been reproduced below:

1. A multi-rotor unmanned aerial vehicle, comprising:
  - a main body comprising a battery compartment;
  - four arms, wherein each arm is coupled to the main body;
  - a propulsion assembly disposed on the each arm, wherein the propulsion assembly comprises a propeller and a motor, the motor being configured to drive the propeller to rotate in order to generate lift force;
  - a battery accommodated in the battery compartment, and the battery comprising a shell and a battery body disposed in the shell;
  - a clamp button disposed on the shell, wherein one end of the clamp button is mounted on the shell and the other end of the clamp button is detachably coupled to the main body; and
  - a restorable elastic piece disposed on an inner side of the clamp button;
    - wherein one end of the restorable elastic piece is disposed on the shell and the other end of the restorable elastic piece is fixed with the clamp button;
    - wherein the battery compartment comprises a clamping portion configured to detachably connect to the clamp button;

wherein the clamp button is configured to cause the restorable elastic piece to be pressed down in a first state where the battery is not completely pushed into the battery compartment or is only partially positioned in the battery compartment;

wherein in a second state where the batter is completely pushed or positioned into the battery compartment, the restorable elastic piece is configured to automatically rebound so that (a) the clamp button is able to return back to its original place and (b) the battery is able to be stuck by the cooperation of the clamping portion and the clamp button.

255. The Accused Products include a main body comprising a battery compartment.

Photographs of the bodies of the Accused Products with and without their respective batteries inserted have been reproduced below so as to highlight the battery compartments of the UAVs:



Figure 9. DJI Phantom 4 Pro (rear view) with Battery Inserted



Figure 10. DJI Mavic Pro (side view) with Battery Inserted



Figure 11. DJI Phantom 4 Pro (rear view) with Battery Removed



Figure 12. DJI Mavic Pro (side view) with Battery Removed



Figure 13. DJI Spark (side view; upside-down) with Battery Inserted



Figure 14. DJI Spark (side view; upside-down) with Battery Removed

256. The Accused Products include four arms, wherein each arm is coupled to the main body. Photographs of the Accused Products show the four arms coupled to the main body have been reproduced below:



Figure 15. DJI Phantom 4 Pro (top view) Showing Four Arms Coupled to the Main Body of the UAV



Figure 16. DJI Mavic Pro (top view) Showing Four Arms Coupled to the Main Body of the UAV



Figure 17. DJI Spark (top view) Showing Four Arms Coupled to the Main Body of the UAV

257. The Accused Products include a propulsion assembly disposed on each arm, wherein the propulsion assembly comprises a propeller and a motor, the motor being configured to drive the propeller to rotate in order to generate lift force. Photographs of the Accused Products showing the propulsion assemblies comprised of a propeller and a motor, wherein the motor is configured to drive the propeller to rotate in order to generate lift force, have been reproduced below:





Figure 18. Propulsion Assembly Comprised of a Propeller and Motor on the DJI Phantom 4 Pro



Figure 19. Propulsion Assembly Comprised of a Propeller and Motor on the DJI Mavic Pro



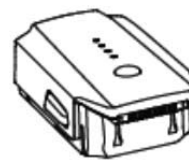
Figure 20. Propulsion Assembly Comprised of a Propeller and Motor on the DJI Spark

258. The Accused Products include a battery accommodated in the battery compartment wherein the battery is comprised of a shell and a battery body disposed in the shell. Illustrations of the batteries used by the Accused Products have been reproduced below:



Intelligent Flight Battery

Figure 21. Battery for the Phantom series



Intelligent Flight Battery

Figure 22. Battery for the Mavic Series



Intelligent Flight Battery

Figure 23. Battery for the Spark

259. The Accused Products include a clamp button disposed on the shell of the battery, wherein one end of the clamp button is fixed on the shell and the other end of the clamp button is

detachably coupled to the main body. Photographs of the clamp buttons of the batteries for the Accused Products have been reproduced below:



Figure 24. Clamp Button on DJI Phantom 4 Pro



Figure 25. Clamp Button on DJI Mavic Pro



Figure 26. Clamp Button on DJI Spark

260. The Accused Products include a restorable elastic piece fixed with the clamp button and a clamping portion on the main body of the UAV that engages the restorable elastic piece and clamp button on the battery. For the Accused Products, the clamping portion presses down the restorable elastic piece and the clamp button in a first state when the battery is not completely pushed into the battery compartment or is only partially positioned in the battery compartment, and the clamp button is configured to automatically rebound in a second state once the battery is fully inserted into the UAV body so that the clamp button is able to return back to its original place and so that the battery is able to be stuck by the cooperation of the clamping portion and the clamp button. Photographs of the restorable elastic pieces on the batteries, as well as photographs of the clamping portion on the body of the UAVs, have been reproduced below:





Figure 27. Restorable Elastic Piece and Clamp Button on DJI Phantom 4 Pro



Figure 28. Restorable Elastic Piece and Clamp Button on DJI Mavic Pro



Figure 29. Restorable Elastic Piece and Clamp Button on DJI Spark



Figure 30. Clamping Portion on the UAV Body of the DJI Phantom 4 Pro



Figure 31. Clamping Portion on the UAV Body of the DJI Mavic Pro



Figure 32. Clamping Portion on the UAV Body of the DJI Spark

261. Without license or authority and in violation of 35 U.S.C. § 271(a), DJI makes, uses, offers to sell, and/or sells within the United States, and/or imports into the United States the

Accused Products, which include each and every element, either literally or under the Doctrine of Equivalents, of at least claim 1 of the '000 patent.

262. Without license or authority and in violation of 35 U.S.C. § 271(b), DJI actively induces the making, using, offering to sell, and/or selling within the United States, and/or importing into the United States the Accused Products, which include each and every element, either literally or under the Doctrine of Equivalents, of at least claim 1 of the '000 patent.

263. Without license or authority and in violation of 35 U.S.C. § 271(c), DJI offers to sell, sells, and/or imports into the United States a component of a patented apparatus constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent and which is not a staple article or commodity of commerce for substantial noninfringing use.

264. DJI's infringement of the '000 patent has caused and will continue to cause Robotics USA irreparable injury and harm for which there is no adequate remedy at law unless and until DJI is permanently enjoined by this Court from infringing the '000 patent.

265. Robotics USA is entitled to recover from DJI the damages it has sustained as a result of DJI's infringing activities in an amount subject to proof at trial, including but not limited to lost profits and not less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

266. This is an exceptional case under 35 U.S.C. § 285, and Robotics USA is entitled to enhanced damages, attorneys' fees, and litigation expenses incurred.

#### **REQUEST FOR RELIEF**

WHEREFORE, Autel respectfully requests that this Court enter judgment in favor of Autel and against DJI as follows:

- a) Dismiss with prejudice DJI SZ and DJI BV's Complaint in its entirety and deny each request for relief made by DJI SZ and DJI BV;
- b) Declare that Autel has not infringed, has not contributed to the infringement of, and has not induced others to infringe any valid and enforceable claim of U.S. Patent Nos. 9,284,040 and 9,592,744;
- c) Declare that U.S. Patent Nos. 9,284,040 and 9,592,744 are invalid;
- d) Declare that DJI's making, using, offering to sell, selling within, and/or importing to the District of Delaware and elsewhere in the United States, the Accused Products infringes one or more claims of the Asserted Patents, in violation of 35 U.S.C. § 271(a);
- e) Declare that DJI's active inducement of others to make, use, offer to sell, sell, and/or import into the District of Delaware and elsewhere in the United States, the Accused Products infringes one or more claims of the Asserted Patents, in violation of 35 U.S.C. § 271(b);
- f) Declare that DJI's offering to sell or selling components of a patented invention in the District of Delaware and elsewhere in the United States, the Accused Products infringes one or more claims of the Asserted Patents, in violation of 35 U.S.C. § 271(c);
- g) Declare that DJI has willfully infringed the Asserted Patents;
- h) Award Robotics USA damages adequate to compensate for DJI's infringement of the claims of the Asserted Patents under 35 U.S.C. § 284, together with interest and costs as fixed by the Court;
- i) Award enhanced damages against DJI for the willful infringement of the Asserted Patents;
- j) Declare that this case is exceptional under 35 U.S.C. § 285;

- k) Award Autel its costs, expenses, and reasonable attorneys' fees under 35 U.S.C. § 285 and all other applicable statutes and rules in common law that would be appropriate, with pre- and post-judgment interest thereon;
- l) Issue an injunction, pursuant to 35 U.S.C. §283, permanently prohibiting DJI from infringing any claims of the Asserted Patents prior to the latest expiration date of the patents, including any extensions;
- m) Declare that the conduct alleged herein constitutes monopolization in violation of the federal Sherman Antitrust Act, 15 U.S.C. § 2;
- n) Declare that the conduct alleged herein constitutes attempted monopolization in violation of the federal Sherman Antitrust Act, 15 U.S.C. § 2;
- o) Declare that the predatory conduct alleged herein constitutes unlawful and/or unfair business practices within the meaning of California's Unfair Practices Act, Cal. Bus. & Prof. Code § 17000, *et seq.*;
- p) Declare that the predatory conduct alleged herein constitutes unlawful and/or unfair business practices within the meaning of Hawaii's Unfair Practices Act, Haw. Rev. Stat. §§ 481-1, *et seq.*;
- q) Grant injunctive relief, pursuant to Section 16 of the Clayton Act, 15 U.S.C. § 26, Cal. Bus. & Prof. Code 17082, and Haw. Rev. Stat. § 481-10 prohibiting DJI and all persons, firms, and corporations acting on its behalf, or under its direction or control, from engaging in any further conduct unlawful under Section 2 of the Sherman Act, California's Unfair Practices Act, and Hawaii's Unfair Practices Act;
- r) Award Autel damages, penalties, and other monetary relief, the exact amount to be proved at trial, and treble all damages so applicable;

- s) Award Autel expenses and costs of suit, including reasonable attorneys' fees to the extent allowed by law; and
- t) Award such other costs and further relief as the Court deems just and proper.

**REQUEST FOR JURY TRIAL**

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure and D. Del. LR 38.1,


Autel requests a trial by jury on all triable issues.

Of Counsel:

STEPTOE & JOHNSON LLP  
Timothy C. Bickham  
John Caracappa  
Jonathan B. Sallet  
Scott M. Richey  
Beau M. Goodrick  
1330 Connecticut Avenue, NW  
Washington DC 20036  
(202) 429-3000  
tbickham@steptoe.com  
jcaracap@steptoe.com  
jsallet@steptoe.com  
srichey@steptoe.com  
bgoodrick@steptoe.com

STEPTOE & JOHNSON LLP  
Michael Flynn-O'Brien  
One Market Street  
Steuart Tower, Suite 1800  
San Francisco, CA 94105  
(415) 365-6700  
mflynnobrien@steptoe.com

YOUNG CONAWAY STARGATT &  
TAYLOR, LLP

  
Anne Shea Gaza (No. 4093)  
Robert M. Vrana (No. 5666)  
Samantha G. Wilson (No. 5816)  
Rodney Square  
1000 North King Street  
Wilmington, DE 19801  
(302) 571-6600  
agaza@ycst.com  
rvrana@ycst.com  
swilson@ycst.com

*Attorneys for Defendants/Counterclaim  
Plaintiffs Autel Robotics USA LLC and Autel  
Aerial Technology Co., Ltd (n/k/a  
Autel Robotics Co., Ltd.)*

Dated: August 10, 2018

01:23510189.1

**CERTIFICATE OF SERVICE**

I, Samantha G. Wilson, hereby certify that on August 17, 2018, I caused to be electronically filed a true and correct copy of the foregoing document with the Clerk of the Court using CM/ECF, which will send notification that such filing is available for viewing and downloading to the following counsel of record:

Kelly E. Farnan, Esquire  
Christine D. Haynes, Esquire  
Richards Layton & Finger, PA  
One Rodney Square  
920 North King Street  
Wilmington, DE 19801  
*farnan@rlf.com*  
*haynes@rlf.com*

*Attorneys for Plaintiffs and Counterclaim Defendants*  
*SZ DJI Technology Co., Ltd. and DJI Europe B.V.*

Jody C. Barillare, Esquire  
Amy M. Dudash, Esquire  
Morgan, Lewis & Bockius LLP  
1007 North Orange Street, Suite 501  
Wilmington, DE 19801  
*jody.barillare@morganlewis.com*  
*amy.dudash@morganlewis.com*

*Attorneys for Plaintiffs and Counterclaim Defendants*

I further certify that on August 17, 2018, I caused the foregoing document to be served via electronic mail upon the above-listed counsel and on the following:

Sherry X. Wu, Esquire  
David M. Farnum, Esquire  
Anova Law Group, PLLC  
21351 Gentry Drive, Suite 150  
Sterling, VA 20166  
*sherry.wu@anovalaw.com*  
*david.farnum@anovalaw.com*

*Attorneys for Plaintiffs and Counterclaim Defendants*  
*SZ DJI Technology Co., Ltd. and DJI Europe B.V.*

Bradford A. Cangro, Esquire  
Jon R. Roellke, Esquire  
Willard K. Tom, Esquire  
Morgan, Lewis & Bockius, LLP  
1111 Pennsylvania Avenue, NW  
Washington, DC 20004  
*bradford.cangro@morganlewis.com*  
*jon.roellke@morganlewis.com*  
*willard.tom@morganlewis.com*

*Attorneys for Plaintiffs and Counterclaim Defendants*

Dated: August 17, 2018

YOUNG CONAWAY STARGATT &  
TAYLOR, LLP

/s/ Samantha G. Wilson  
Anne Shea Gaza (No. 4093)  
Robert M. Vrana (No. 5666)  
Samantha G. Wilson (No. 5816)  
Rodney Square  
1000 N. King Street  
Wilmington, Delaware 19801  
302-571-6600  
*agaza@ycst.com*  
*rvrana@ycst.com*  
*swilson@ycst.com*

*Attorneys for Defendants and Counterclaim  
Plaintiffs*